

**Amendments to the Drawings**

Please delete Sheet 1 (Figs. 1-3) and replace it with the attached Replacement Sheet 1. In accordance with the Examiner's helpful suggestions, Fig. 1 on Sheet 1 has been labeled as "Prior Art".

Please delete Sheet 5 (Figs. 8 and 9) and replace it with the attached Replacement Sheet 5. Fig. 8 has been amended so that the zones in the top row (referenced in the Official Action) are now labeled "-2" and "2", respectively.

Please delete Sheet 6 (Figs. 10 and 11) and replace it with the attached Replacement Sheet 6. The second occurrence of "6.964" in Fig. 10 has been changed to "6.969".

Please delete Sheet 8 (Fig. 14) and replace it with the attached Replacement Sheet 8, in which the word "antenne" in the upper right of Fig. 14 has been changed to "antenna".

---

**Remarks**

The Applicant notes with appreciation the indication that claims 2-13 and 20 would be allowable if rewritten in independent form. The Applicant also appreciates the indication that claims 17 and 19 would be allowable if rewritten to overcome objections as to form. Several of these claims have been rewritten in independent form. However, it is noted that several claims now include the element “means for manipulating”, which can include those elements previously identified as “means for transmitting and/or receiving and/or displaying and/or using” in original claim 1. The claims have also been amended to be consistent with the newly amended paragraphs in the specification set forth above.

New claim 21 is similar to original claim 1, with changes for consistency with the amended specification, and also includes means for transmitting, receiving, displaying and using the zone reference sequence. New claim 22 is similar to original claim 2, but does not include means for manipulating or means for transmitting, receiving, displaying and using the zone reference sequence.

**Drawings**

The Applicant thanks the Examiner for the thoughtful and helpful suggestions with regard to Figures 1, 8 and 10. Replacement Sheets 1, 5 and 6 are submitted herewith in accordance with the Examiner’s suggestions. Fig. 1 is now labeled “Prior Art”. Fig. 8 has been modified so that the zones in the top row (discussed in the Official Action) are now labeled as “-2” and “2”, respectively. Fig. 10 has been modified so that the second occurrence of “6.964” is now “6.969”. Also, the word “antenne” in Fig. 14 has been corrected to read “antenna”. It is requested that the objection to the drawings be reconsidered and withdrawn.

---

Specification

The Applicant acknowledges the objections to the specification and thanks the Examiner for the helpful suggestion regarding same. On pages 8 and 9, paragraph 0029 has been amended to correct the description of Fig. 5, which shows a sphere divided into 18 zones.

The Examiner correctly notes that the invention relates to zones in a cascading relationship. As recited in claim 1, lines 4 – 8, the ranks are integers greater than or equal to 1. Thus, the ranks are 1, 2, 3 .....n-1, n, n+1, ..., m. The term “n” is used to simultaneously represents an inferior rank (for n-1) and a rank (as every number 1,2, 3...). In accordance with the Examiner’s helpful suggestion, paragraphs 0027, 0030, 0043 and 0050 of the Specification and claims 1, 17 and 19 has been amended to clarify the language.

Claim Objections

The Examiner’s helpful suggestion with regard to the “and/or” language in claims 1, 17 and 19 is noted with appreciation. The Applicant has accordingly amended claim 1 to recite “means for manipulating said zone reference sequence”. Claims 17 and 19 have been similarly amended.

Claim 2 has been rewritten to include all of the limitations of claim 1, as modified herein.

The objection to claim 3 is acknowledged. The Applicant has amended claim 3 to make more clear that the zone division circles have radii selected so that the zones of rank n have the same surface measurement, as opposed to sharing the same surface. It is possible to have the same surface area for each of the 9 zones if the radii of the division circles are  $R1 = R/\sqrt{3}$  and  $R2 = R\sqrt{2}/\sqrt{3}$ , where R is the overall radius of the surface of circular form. As shown in Fig. 4 and explained in the specification at paragraph 0076, one skilled in the art would understand that

each zone has the same surface area when the sector is so divided. Although the zones are distinct from one another, each has a surface area of  $1/6 * (\pi * R^2) / 9$ .

Claim 5 has been rewritten to include all of the limitations of claim 1, as amended.

The Applicant thanks the Examiner for pointing out the issue regarding the grammar of “for directrix curve the contour” in claim 7. The claim has been amended to make clear that the cone has for its directrix curve the contour of one of the zones of rank n. The expression “directrix curve” is used to describe a cone in space geometry.

Claim Rejections under 35 U.S.C. §102

The Applicant acknowledges the Rejections under 35 U.S.C. §102 as being allegedly anticipated by Jones. Jones relates to a geographic location identification system in which the geographical region is circumscribed by a north-south positioned rectangular parallelogram having opposite parallel sides and 90° (ninety degree) included angles.

In sharp contrast, Claim 1 is directed to a system for localizing a zone in space in relation to a predetermined point on a surface, in which the system includes means for manipulating a zone reference sequence. It is noted that the means for manipulating is a means plus function element, which is properly interpreted for purposes of patentability by examining the corresponding structure, materials and acts described in the specification and equivalents thereof. MPEP §2181. Means for manipulating the zone reference sequence such as means for transmitting, receiving, displaying and using are described in the Specification, for example, in paragraphs [0038] and [0039], where satellites and cellular telephone network terminals are described. Further examples of means for transmitting, receiving, displaying and using the zone reference sequence are set forth in detail in paragraph [0179], where a global positioning system receiver and a mobile telephone are described, and in paragraphs [0184] and [0185], where

---

telescopes, machine tools for fabricating parts and medical instruments are described.

Jones does not show, describe or suggest any such device or its equivalent. As noted in the Official Action, Jones, at column 10, indicates that the geographic location identification system can be computerized. In this computerized system, alphanumeric characters are used as a file name to store and retrieve particular maps of a section of a geographical region. Using this file name system, a series of maps can be created, stored in memory, retrieved and displayed. Jones does not include any description or suggestion of any device for transmitting, receiving and using the geographic location identification system in the way described in the application or the equivalents thereof.

Claim Rejections under 35 U.S.C. §103

The rejection of Claims 14 and 15 under 35 U.S.C. §103(a) as being allegedly obvious over Jones in view of Delorme is acknowledged. Claims 14 and 15 are dependent on Claim 1, and therefore include all of the elements thereof. For the reasons explained above, Jones does not teach or suggest at least the element of means for manipulating (transmitting, receiving, displaying and using) a position referencing sequence. Similar to Jones, Delorme describes a mapping system that can be computer implemented using a Windows-type program. Also, like Jones, Delorme does not teach or suggest means for manipulating (transmitting, receiving, displaying and using) a position referencing sequence as described in the application.

In addition, with respect to claim 15, Jones does not teach to divide a digital image and to adapt this division to the resolution (size and number of pixels) of the image. This feature is also not taught or suggested by Delorme.

The rejection of Claim 16 as allegedly obvious over the theoretical combination of Jones and Moskowitz is acknowledged. Moskowitz describes an educational device that can be used to

convert between different number systems. For the reasons set forth more fully below with respect to Claim 18, the Applicant respectfully submits that there is no suggestion to use the educational device in conjunction with the mapping system of Jones. Further, even if one were to combine the references, the theoretical combination still does disclose, teach or suggest the above-discussed elements of Claim 1. Specifically, Moskowitz does not cure the deficiencies of Jones in describing or suggesting means for transmitting, receiving, displaying and using a position or referencing sequence as described in the application. For at least this reason, Claim 16 is patentable over the theoretical combination of Jones and Moskowitz.

The rejection of Claim 18 under 35 U.S.C. §103(a) as being allegedly obvious over the theoretical combination of Jones, Delorme and Moskowitz is acknowledged. The Applicant respectfully submits that the combination cannot be the basis for a proper rejection because one skilled in the art would not look to Moskowitz in seeking a solution to the problem faced by the Applicant. This is at least because, (1) being from the field of educational devices, Moskowitz is not analogous prior art, and (2) there is no suggestion or motivation found in the references, or in the general knowledge of one skilled in the art, to combine Moskowitz with Jones and Delorme to arrive at the invention.

In order for a reference to serve as a proper basis for rejection, the reference must be in the field of the Applicant's endeavor, or be reasonably pertinent to the particular problem with which the inventor was concerned. *In re Oetiker*, 24 USPQ 2d 1443, 1445 (Fed Cir 1992). This application relates to measuring angles, lengths and time using bases 3 and 9 for defining and localizing a zone in space or time, and particularly for enabling digital localization of the zone in space or in time. Particular applications include those found in the fields geography and cartography. Moskowitz, on the other hand, describes an educational device that converts

between number systems. Having no connection to the fields of geography or cartography, Moskowitz is clearly not within the Applicant's field of endeavor.

When a reference is not in the field of the Applicant's endeavor, it may be considered reasonably pertinent if, "it is one which, because of the matter with which it deals, logically would have commended itself to an inventors attention in considering his problem." *In re Clay*, 23 USPQ 2d 1058, 1060-1061 (Fed Cir 1992). Common sense must be used to determine in which field a person of ordinary skill would be expected to look for a solution of the problem faced by the Applicant. 24 USPQ 2d at 1446.

One of the problems that this application addresses is the use of inconsistent units in defining point on the earth, as in a GPS system, which might measure latitude and longitude in terms of degrees (base 360), minutes (base 60) and then in thousands of minutes (base 1,000). Similar problems exist when measuring lengths, angles and the like. *See*, Specification at paragraphs [0009] through [0026]. It is well-known that any of these units can be converted into equivalent units. For example, equalities of angle measurements are provided in the Specification at [0015]. It is also well known that values in a certain number system can be easily converted to values in a number system of different base. The Moskowitz device merely provides a tool for performing such well known conversions. Thus, Moskowitz merely provides a known solution to a known problem, that is converting from one base number system to another. It is not relevant to the problem faced by the inventor of establishing a measurement system for localizing a zone in space in relation to a predetermined point on a surface, or of creating computer code that enables enclosure of that zone as recited in Claim 18. Therefore, Moskowitz should not be considered analogous prior art, and rejection of Claim 18 should be withdrawn.

In addition, the Applicant respectfully submits that even if Moskowitz were analogous prior art, the rejection should be withdrawn because there is no suggestion or motivation in the references themselves, or in the general knowledge of one skilled in the art, to combine Moskowitz with Jones or Delorme in order to arrive at the subject matter of Claim 18. The Official Action does not point to any evidence of a suggestion or motivation to combine these references. Instead, it is believed that the Official Action inadvertently relied on impermissible hindsight to piece together the elements of the invention using the Applicant's disclosure as a roadmap. The use of hindsight is tempting because, in light of the Applicant's disclosure, it might seem that the computer program of Claim 18 is a simple solution to the problem faced by the Applicant. However, a proper obviousness analysis requires the difficult but critical step of casting the mind back to the time back when the invention was made. It is this requirement that guards entry into the "tempting but forbidden zone of hindsight". *In re Dembiczak*, 50 USPQ 2d 1614, 1616-1617 (Fed Cir 1999).

In that case, the Court made clear that the "best defense against the subtle but powerful attraction of hindsight-based analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references." *Id.* The evidence of a suggestion, teaching or motivation to combine references can come from a number of sources; but the range of sources available "does not diminish the requirement for actual evidence." *Id.*

Considering this rejection, Moskowitz provides no teaching, description or suggestion to provide computer code that enables enclosure of a zone of a planar space, successive division of sides thereof into three, and automatic numbering of the divisions by three of the sides as well as interior zones that it delimits. In fact, Moskowitz provides no suggestion to provide any type of computer code at all. Instead Moskowitz describes a hand-operated device having windows and

dials. There is simply no suggestion or motivation found within Moskowitz to provide computer code as recited in Claim 18. As indicated in the Official Action, Jones and Delorme do not describe or suggest any manner in which computer codes can enable enclosure of the zone and enable calculations to be performed in base 9 and converted to decimal data. Because Jones and Delorme also provide no suggestion that such computer code would be useful in the geographic location identification system of Jones, or in the global mapping system of Delorme, these references also provide no suggestion or motivation to combine them with Moskowitz.

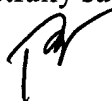
One skilled in the arts of measuring or digital localization of a zone in space, and especially in the fields of geography and cartography, who was searching for a way to improve measuring and numbering systems, would not be motivated to look at Moskowitz for a solution because Moskowitz is non-analogous art. In addition, even if Moskowitz were applicable prior art, there is no evidence of record of any suggestion or motivation to combine Moskowitz with Jones or Delorme. For these reasons, it is respectfully requested that the rejection of Claim 18 based on the theoretical combination of Jones, Delorme and Moskowitz be reconsidered and withdrawn.

---

**Conclusion**

For the reasons set forth above, it is respectfully requested that the rejections and objections set forth in the Official Action be reconsidered and withdrawn. In light of the foregoing, the Applicant respectfully submits that the entire application is now in condition for allowance which is respectfully requested.

Respectfully submitted,



T. Daniel Christenbury  
Reg. No. 31,750

TDC:SAN:vbm  
(215) 656-3381

Attached

Replacement Sheets 1, 5, 6 and 8